
ARNOLD & PORTER

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555 Twelfth Street, NW
Washington, DC 20004-1206

September 29, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attn: Mail Stop Sequence

Re: U.S. Patent Application No. 08/657,749
Filed: May 30, 1996
Title: **Nucleic Acid Sequences Encoding a Plant Cytoplasmic Protein Involved in Fatty Acyl-CoA Metabolism.**
Applicants: James G. METZ *et al.*
Atty. Docket No.: 16518.025

Sir:

In response to the telephone conference with the Examiner on September 17, 2003 informing Applicants that the Sequence Listing was noncompliant, Applicants submit herewith:

- (1) a corrected paper copy of the Sequence Listing (64 pages);
- (2) a copy of the Sequence Listing in Computer Readable Form (CRF) on a floppy diskette;
- (3) a Statement to Support Filing and Submission in Accordance with 37 C.F.R. §§ 1.821-1.825; and
- (4) a return postcard.

Applicants request that attached postcard be stamped with the filing date of these documents and returned to our courier.

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Page 2

It is the undersigned's understanding, based on a September 17, 2003 conference with the Examiner, that the sequence listing filed on August 11, 2003 was a bona fide attempt to comply with the requirements outlined in the Office Action mailed March 11, 2003. Therefore, since this response is being submitted within thirty (30) days of the Examiner's notification of noncompliance (communicated by facsimile on September 17, 2003), it is believed that no fees are due at this time. However, if any fees are required in the present application, then the Commissioner is hereby authorized to charge such fees to Arnold & Porter Deposit Account No. 50-2387, referencing matter number 16518.025. A duplicate copy of this letter is enclosed.

Respectfully submitted,

Rachel R. Adams

Rachel L. Adams (Reg. Attorney No. 54,660)
David R. Marsh (Reg. Attorney No. 41,408)
Holly Logue Prutz (Reg. Attorney No. 47,755)

Attachments

PC/MS-DOS PATENTIN 2.1
METZ, JAMES et al.
Appl. No.: 08/657,749
Filed: 30-MAY-1996
Data Rec: 23-SEP-2003
Atty. Dkt. No: 16518.025

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GP 1800 FAX MACHINE 8

003

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1600

RAW SEQUENCE LISTING DATE: 08/18/2003
 PATENT APPLICATION: US/08/657,749C TIME: 13:10:45

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 Output Set: H:\CRF4\08182003\H657749C.raw

3 <110> APPLICANT: METZ, JAMES G.
 4 LARDIZABAL, KATHRYN D.
 5 LASSNER, MICHAEL
 7 <120> TITLE OF INVENTION: NUCLEIC ACID SEQUENCES ENCODING A PLANT CYTOPLASMIC
 8 PROTEIN INVOLVED IN FATTY ACYL-COA METABOLISM
 10 <130> FILE REFERENCE: 16518.025
 12 <140> CURRENT APPLICATION NUMBER: 08/657,749C
 13 <141> CURRENT FILING DATE: 1996-05-30
 15 <150> PRIOR APPLICATION NUMBER: PCT/US94/13686
 16 <151> PRIOR FILING DATE: 1994-11-30
 18 <150> PRIOR APPLICATION NUMBER: 08/265,047
 19 <151> PRIOR FILING DATE: 1994-06-23
 21 <150> PRIOR APPLICATION NUMBER: 08/160,602
 22 <151> PRIOR FILING DATE: 1993-11-30
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 25 <151> PRIOR FILING DATE: 1993-05-20
 27 <150> PRIOR APPLICATION NUMBER: PCT/US92/09863
 28 <151> PRIOR FILING DATE: 1992-11-13
 30 <150> PRIOR APPLICATION NUMBER: 07/933,411
 31 <151> PRIOR FILING DATE: 1992-08-21
 33 <150> PRIOR APPLICATION NUMBER: 07/796,256
 34 <151> PRIOR FILING DATE: 1991-11-20
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 62 gtggcataact taaaagaaa atg gag gaa atg gga agc att tta gag ttt ctt 112
 63 Met Glu Glu Met Gly Ser Ile Leu Glu Phe Leu

Does Not Comply
 Corrected Discetete Needed

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RAW SEQUENCE LISTING DATE: 08/18/2003
PATENT APPLICATION: US/08/657,749C TIME: 13:10:45

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71	Ile	Phe	Val	Glu	Lys	Val	Leu	Arg	Ser	Gln	Pro	Asn	Val	Lys	Lys	Leu	
72					30			35				40					
74	tat	ctt	ttt	ttg	aga	gca	acc	gat	gac	gag	aca	gtc	gtc	cta	cgc	ttg	256
75	Tyr	Leu	Leu	Leu	Arg	Ala	Thr	Asp	Asp	Glu	Thr	Ala	Ala	Leu	Arg	Leu	
76					45			50				55					
78	caa	aat	gag	gtt	ttt	gga	aaa	gag	ttg	ttc	aaa	gtt	ctg	aaa	caa	aat	304
79	Gln	Asn	Gln	Val	Phe	Gly	Lys	Glu	Leu	Phe	Lys	Val	Leu	Lys	Gln	Asn	
80	60				65			70				75					
82	tta	ggc	aat	tte	tat	tcc	ttt	gtt	tca	gaa	aaa	gtg	act	gtt	gtt		352
83	Leu	Gly	Ala	Asn	Phe	Tyr	Ser	Phe	Val	Ser	Glu	Lys	Val	Thr	Val	Val	
84					80			85				90					
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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/08/657,749C DATE: 08/18/2003
 TIME: 13:10:45

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84					80		85									90		
86	ccc	ggg	gtt	att	act	ggt	gaa	gac	ttt	tgt	ctc	aaa	gac	gtc	aat	ttt		400
87	Pro	Gly	Asp	Ile	Thr	Gly	Glu	Asp	Leu	Cys	Leu	Lys	Asp	Val	Asn	Leu		
88					95		100									105		
90	aag	gaa	gaa	atg	tgg	agg	gaa	atc	gtt	gtt	gtc	aat	cta	gtc	aat	ttt		448
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92					110		115									120		
94	aca	atc	aac	tcc	att	gaa	agg	tac	gac	gtg	tct	ctt	atc	aac	aca			496
95	Thr	Ile	Asn	Phe	Ile	Glu	Arg	Tyr	Asp	Val	Ser	Leu	Ile	Asn	Thr			
96					125		130									135		
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103	Lys	Ile	Phe	Val	His	Val	Ser	Thr	Ala	Tyr	Val	Ser	Gly	Glu	Lys	Asn		
104					160		165									170		
106	ggg	tta	ata	ctg	gag	aag	cct	tat	tat	atg	ggc	gag	tca	ctt	aat	gga		640
107	Gly	Leu	Ile	Ile	Glu	Lys	Pro	Tyr	Tyr	Met	Gly	Glu	Ser	Ile	Asn	Gly		
108					175		180									185		
110	aga	tta	ggg	gtt	ctg	gac	att	aat	gtt	gag	aaa	ctt	gtg	gag	gtc	aaa		688
111	Arg	Leu	Gly	Leu	Asp	Ile	Asn	Val	Glu	Lys	Lys	Leu	Val	Glu	Ala	Lys		
112					190		195									200		
114	atc	aat	gaa	ctt	caa	gca	ggc	ggg	gca	agg	gaa	aag	tcc	att	aaa	tcg		736
115	Ile	Asn	Glu	Leu	Gln	Ala	Ala	Gly	Ala	Thr	Glu	Lys	Ser	Ile	Lys	Ser		
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119	Thr	Met	Lys	Asp	Met	Gly	Ile	Glu	Arg	Ala	Arg	His	Trp	Gly	Trp	Pro		
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122	aat	gtt	tat	gtt	tcc	acc	aag	gca	tta	ggg	gag	atg	ctt	tgg	atg	caa		832
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GP 1800 FAX MACHINE 8

4005

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/08/657,749C

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206 20 25 30
208 Val Leu Arg Ser Gln Pro Asn Val Lys Lys Leu Tyr Ile Leu Leu Arg
209 35 40 45
211 Ala Thr Asp Asp Glu Thr Ala Ala Leu Arg Leu Gln Asn Glu Val Phe
212 50 55 60
214 Gly Lys Glu Leu Phe Lys Val Leu Lys Gln Asn Leu Gly Ala Asn Phe
215 65 70 75 80
217 Tyr Ser Phe Val Ser Glu Lys Val Thr Val Val Pro Gly Asp Ile Thr
218 85 90 95
220 Gly Glu Asp Leu Cys Leu Lys Asp Val Asn Leu Lys Glu Glu Met Trp
221 100 105 110
223 Arg Glu Ile Asp Val Val Val Asn Leu Ala Ala Thr Ile Asn Phe Ile
224 115 120 125
226 Glu Arg Tyr Asp Val Ser Leu Leu Ile Asn Thr Tyr Gly Ala Lys Tyr
227 130 135 140
229 Val Leu Asp Phe Ala Lys Lys Cys Asn Lys Leu Lys Ile Phe Val His
230 145 150 155 160
232 Val Ser Thr Ala Tyr Val Ser Gly Glu Lys Asn Gly Leu Ile Leu Glu
233 165 170 175
235 Lys Pro Tyr Tyr Met Gly Glu Ser Leu Asn Gly Arg Leu Gly Leu Asp
236 180 185 190
238 Ile Asn Val Glu Lys Lys Leu Val Gln Ala Lys Ile Asn Glu Leu Gln
239 195 200 205
241 Ala Ala Gly Ala Thr Glu Lys Ser Ile Lys Ser Thr Met Lys Asp Met
242 210 215 220
244 Gly Ile Glu Arg Ala Arg His Trp Gly Trp Pro Asn Val Tyr Val Phe
245 225 230 235 240
247 Thr Lys Ala Leu Gly Glu Met Leu Leu Met Gln Tyr Lys Gly Asp Ile
248 245 250 255
250 Pro Leu Thr Ile Ile Arg Pro Thr Ile Ile Thr Ser Thr Phe Lys Glu
251 260 265 270
253 Pro Phe Pro Gly Trp Val Glu Gly Val Arg Thr Ile Asp Asn Val Pro
254 275 280 285
256 Val Tyr Tyr Gly Lys Gly Arg Leu Arg Cys Met Leu Cys Gly Pro Ser
257 290 295 300
259 Thr Ile Ile Asp Leu Ile Pro Ala Asp Met Val Val Asn Ala Thr Ile
260 305 310 315 320
262 Val Ala Met Val Ala His Ala Asn Gln Arg Tyr Val Glu Pro Val Thr
263 325 330 335
265 Tyr His Val Gly Ser Ser Ala Ala Asn Pro Met Lys Leu Ser Ala Leu
266 340 345 350
268 Pro Glu Met Ala His Arg Tyr Phe Thr Lys Asn Pro Trp Ile Asn Pro
269 355 360 365

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007

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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/08/657,749C DATE: 08/18/2003
 TIME: 13:10:45

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271 Asp Arg Asn Pro Val His Val Gly Arg Ala Met Val Phe Ser Ser Phe
 272 370 375 380
 274 Ser Thr Phe His Leu Tyr Leu Thr Leu Asn Phe Leu Leu Pro Leu Lys
 275 385 390 395 400
 277 Val Leu Glu Ile Ala Asn Thr Ile Phe Cys Gln Trp Phe Lys Gly Lys
 278 405 410 415
 280 Tyr Met Asp Leu Lys Arg Lys Thr Arg Leu Leu Leu Arg Leu Val Asp
 281 420 425 430
 283 Ile Tyr Lys Pro Tyr Leu Phe Phe Gln Gly Ile Phe Asp Asp Met Asn
 284 435 440 445
 285 Thr Glu Lys Leu Arg Ile Ala Ala Lys Glu Ser Ile Val Glu Ala Asp
 287 450 455 460
 289 Met Phe Tyr Phe Asp Pro Arg Ala Ile Asn Trp Glu Asp Tyr Phe Ile
 290 465 470 475 480
 292 Lys Thr His Phe Pro Gly Val Val Glu His Val Leu Asn
 293 485 490
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 313 Met Lys Ala Lys Thr Ile 1 5
 314
 316 aca aac ccg gag atc oaa gtc tcc acg acc atg acc acc acg acc acg 104
 317 Thr Asn Pro Glu Ile Gln Val Ser Thr Thr Met Thr Thr Thr Thr Thr
 318 10 15 20
 320 act atg acc gcc act ctc ccc aac ttc aag tcc tcc atc aac tta cac 152
 321 Thr Met Thr Ala Thr Leu Pro Asn Phe Lys Ser Ser Ile Asn Leu His
 322 25 30 35
 324 cac gtc aag ctc ggc tac cac tac tta atc tcc aat gcc ctc ttc ctc 200
 325 His Val Lys Leu Gly Tyr His Tyr Leu Ile Ser Asn Ala Leu Phe Leu
 326 40 45 50
 328 gta ttc atc ccc ett ttg ggc ctc gct tcc gac cat ctc tcc tcc ttc 248
 329 Val Phe Ile Pro Leu Leu Gly Leu Ala Ser Ala His Leu Ser Ser Phe
 330 55 60 65 70
 332 tcc gcc cat gac ttg tcc ctg ctc gac ctc ctt cgc cgc aac ctc 296
 333 Ser Ala His Asp Leu Ser Leu Leu Phe Asp Leu Leu Arg Arg Asn Leu
 334 75 80 85
 336 ctc cct gtt gtc gtt tgt tct ctc ttc gtt tta tta gca acc cta 344
 337 Leu Pro Val Val Val Cys Ser Phe Leu Phe Val Leu Leu Ala Thr Leu
 338 90 95 100

what about "n" at location 73?

(see p.6)

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GP 1800 FAX MACHINE 8

008

08/657,749c 6

agc ttg ttt aac cca acg ccg tgg tca tcc atg ata gtt aac cat 728
Ser Leu Phe Asn Pro Thr Pro Ser Leu Ser Ser Met Ile Val Asn His
215 220 225 230
^{SO} location tac aag ~~cnn~~agg ggt eat ata ctt agc tat aat ctt ggt ggc atg ggt 776
Tyr Lys ~~Asn~~ Arg Gly Asn Ile Leu Ser Tyr Asn Leu Gly Gly Met Gly
235 240 245

see p. 7 for more more

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009

08/651,749C 7

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<211> LENGTH: 524
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<223> OTHER INFORMATION: Variable amino acid
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20 25 30
Ser Ser Ile Asn Leu His His Val Lys Leu Gly Tyr His Tyr Leu Ile
35 40 45
Ser Asn Ala Leu Phe Leu Val Phe Ile Pro Leu Leu Gly Leu Ala Ser
50 55 60
Ala His Leu Ser Ser Phe Ser Ala His Asp Leu Ser Leu Leu Phe Asp
65 70 75 80
Leu Leu Arg Arg Asn Leu Leu Pro Val Val Val Cys Ser Phe Leu Phe
85 90 95
Val Leu Leu Ala Thr Leu His Phe Leu Thr Arg Pro Arg Asn Val Tyr
100 105 110
Leu Val Asp Phe Gly Cys Tyr Lys Pro Gln Pro Asn Leu Met Thr Ser
115 120 125
His Glu Met Phe Met Asp Arg Thr Ser Arg Ala Gly Ser Phe Ser Lys
130 135 140
Glu Asn Ile Glu Phe Gln Arg Lys Ile Leu Glu Arg Ala Gly Met Gly
145 150 155 160
Arg Glu Thr Tyr Val Pro Glu Ser Val Thr Lys Val Pro Ala Glu Pro
165 170 175
Ser Ile Ala Ala Arg Ala Glu Ala Glu Val Met Tyr Gly Ala
180 185 190
Ile Asp Glu Val Leu Glu Lys Thr Gly Val Lys Pro Lys Gln Ile Gly
195 200 205
Ile Leu Val Val Xaa Cys Ser Leu Phe Asn Pro Thr Pro Ser Leu Ser
210 215 220
Ser Met Ile Val Asn His Tyr Lys Xaa Arg Gly Asn Ile Leu Ser Tyr
225 230 235 240

see
below

T

see p.8

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GP 1800 FAX MACHINE 8

010

8--

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/08/657,749C

DATE: 08/18/2003
TIME: 13:10:46

Input Set : A:\1631802.app
Output Set: N:\CRF4\08182003\H657749C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 1537,1698,1609
Seq#:3; N Pos. 676,737
Seq#:3; Xaa Pos. 213,233
Seq#:4; Xaa Pos. 213,233
Seq#:22; N Pos. 345
Seq#:22; Xaa Pos. 102
Seq#:23; Xaa Pos. 102
Seq#:24; N Pos. 155,217
Seq#:24; Xaa Pos. 51,72
Seq#:25; Xaa Pos. 51,72
Seq#:31; Xaa Pos. 3,10
Seq#:35; Xaa Pos. 4,5
Seq#:36; Xaa Pos. 7,8,11
Seq#:38; Xaa Pos. 1,17
Seq#:39; Xaa Pos. 7
Seq#:42; N Pos. 9,12,15
Seq#:43; N Pos. 15
Seq#:46; Xaa Pos. 3
Seq#:47; N Pos. 30,33
Seq#:49; N Pos. 30,33,36
Seq#:50; N Pos. 29,32,35
Seq#:52; N Pos. 39
Seq#:53; N Pos. 27

Please issue these n/Xaa
locations are explained

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